DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 6, filed 3/18/2008, with respect to double patenting have been fully considered and are persuasive. The rejection of claims 1—14 under double patenting has been withdrawn.

2. Applicant's arguments filed 3/18/2007, see pages 7 – 9, with respect to rejections made under 35 USC 103, have been fully considered but they are not persuasive.

3. Applicant argues, relating to the Sorhaug reference, that Sorhaug fails to teach means for inserting device data "without disrupting the flow of data in the network cable". Applicant notes that Sorhaug states that

> "the medium monitor **may** interrupt medium data transfer in either direction and insert its data for diagnostic or other network purposes"
>
> (Abstract, emphasis added)

and that Sorhaug states that

> "the network monitor or medium analyzer can selectively insert data in either direction to provide complete diagnostic control testing of the channel."
>
> (col. 2 lines 12 – 14)

4. However, in the Abstract, Sorhaug merely states that the monitor *may* interrupt data transfer, not that it must interrupt data transfer to insert data. Furthermore, in col. 2, lines 12 – 14, Sorhaug further discusses inserting data without discussing any data disruption. Thus, given that there are inherently only two options for data insertions (disruptively or non-disruptively), since Sorhaug discloses both options, it would have

been obvious to one of ordinary skill in the art at the time of the invention to insert data and not disrupt the data flow.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 – 6 and 8 - 11 are rejected under 35 U.S.C. 103(a) as being anticipated by Worrall et al. (US 2006/0153177 A1), hereafter Worrall, in view of in view of Sørhaug et al. (US 6,424,627 B1), hereafter Sorhaug, further in view of NetOptics (4x1 GigaBit Tap).

7. Regarding claim 1, Worrall shows a network tap that permits one or more attached devices to communicate with a node of a network, the node of the network communicating with a network cable transmitting network data thereon, the network cable having a first segment and a second segment, the network tap comprising:

a first set of tap ports including a first tap port and a second tap port, the first set of tap ports configured to receive a copy of network data obtained from the network cable;

a second set of tap ports configured to receive a copy of network data obtained from the network cable (Abstract, Figs. 1A-1C, Figs 4 and 5, [0023-0029]).

Worrall does not show means for combining the network data carried on the first

segment and the second segment of the network cable, nor does Worrall show means for inserting device data from the different network devices onto the network cable without disrupting the flow of data in the network cable.

Sorhaug shows means for combining the network data carried on the first segment and the second segment of the network cable (Fig. 2; col. 3 lines 39 – 45).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Worrall with that of Sorhaug in order to allow for more control of the network tap apparatus, and how the data in said network tap system was handled in order to enable more options for configuration and use as well as to monitor data at maximum data rates while providing not significant network data delay (Sorhaug, Abstract, col. 1 line 40 – col. 2 line 10).

Worrall in view of Sorhaug do not explicitly teach where said inserting device data form the different network devices onto the network cable does not disrupt data in the network cable.

Worrall in view of Sorhaug teach that the insertion of data *may* interrupt data transfer, not that it must interrupt data transfer to insert data. Furthermore, in col. 2, lines 12 – 14, Sorhaug discusses inserting data without discussing any data disruption. Thus, given that there are inherently only two options for data insertions (disruptively or non-disruptively), since Worrall in view of Sorhaug disclose both options, it would have been obvious to one of ordinary skill in the art at the time of the invention to insert data and not disrupt the data flow.

Worrall in view of Sorhaug do not show delivering the combined network data to the first set of tap ports and the second set of tap ports, wherein a different network device can connect with each of the first and second tap ports and each different network device can receive the combined network data.

NetOptics show delivering the combined network data to the first set of tap ports and the second set of tap ports, wherein a different network device can connect with each of the first and second tap ports and each different network device can receive the combined network data (Paragraph 1, Figures in the upper right and middle of pg. 1; see the "4 simultaneous access points" of the illustrated network tap).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Worrall in view of Sorhaug with that of NetOptics in order to allow for the connection of more devices, enabling more detailed network monitoring as well as more possible monitoring configurations.

1. Regarding claim 2, Worrall in view of Sorhaug and NetOptics further show where the first and second sets of tap ports comprises a first and second tap port, wherein each of the first and second tap port is configured to be able to receive a copy of the combined network data (Worrall; Figs. 1A –1C, 4 and 5; NetOptics; Figures in the upper right and middle of pg. 1).

2. Regarding claim 3, Worrall in view of Sorhaug and NetOptics further show the first attached device can be selectively connected to the first tap port of the first set of tap ports and wherein a third attached device can be selectively connected to the second tap port of the first set of tap ports (specifically where NetOptics show a 4x1

GigaBit Regeneration Tap, which allows up to four devices to be connected to tap ports, which thus discloses having a third device connected to a second tap port (Paragraph 1, Figures in the upper right and middle of pg. 1)).

3. Regarding claim 4, Worrall in view of Sorhaug and NetOptics further show wherein the second attached device can be selectively connected to the first tap port of the second set of tap ports and wherein a fourth attached device can be selectively connected to the second tap port of the second set of tap ports (NetOptics; Paragraph 1, Figures in the upper right and middle of pg. 1).

4. Regarding claim 5, Worrall in view of Sorhaug and NetOptics further show wherein at least one of the first and second tap ports is configured to receive device data from the corresponding attached device (Sorhaug, Fig. 2, col. 2 lines 5 – 65).

Regarding claim 6, Worrall in view of Sorhaug and NetOptics further show wherein the means for combining the network data carried on the first segment and the second segment of the network cable and delivering the combined network data to the first set of tap ports and the second set of tap ports comprises a switch (Worrall, Fig. 1, Fig. 1(c)).

8. Regarding claim 8, Worrall in view of Sorhaug and NetOptics further show wherein the means for inserting received device data into the network cable without disrupting the flow of data therein inserts at least one of: a kill packet to instruct a firewall to prohibit data flow from a particular source, instructions from an attached device to other components for use by the components (Sorhaug, col. 2 lines 5 – 15, col. 3 lines 10 - 21).

9. Regarding claim 9, Worrall in view of Sorhaug and NetOptics further show means for inserting received device data into the network cable without disrupting the flow of data therein comprises an integrated circuit (Sorhaug, col. 2 lines 55 – 56, col. 3 lines 4 5- 47).

10. Regarding claim 10, Worrall in view of Sorhaug and NetOptics further show wherein the integrated circuit comprises a field programmable gate array (Worrall, Fig. 4).

11. Regarding claim 11, Worrall in view of Sorhaug and NetOptics further show wherein the means for inserting received device data into the network cable without disrupting the flow of data therein comprises an Ethernet switch (Worrall, Fig. 1(c)).

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Worrall in view of Sorhaug and NetOptics as applied to claims 1, 2 and 6, above, and further in view of Tomonaga et al. (5,610,913), hereafter Tomonaga.

Worrall view of Sorhaug and NetOptics shows claim 6, including tap ports and well as demultiplexing and multiplexing data, which inherently involves separating two or more previously combined data streams (Figs. 4 and 5), as well as where said demultiplexing and multiplexing can be done in conjunction with a switch (Fig. 1(c)).

Worrall in view of Sorhaug and NetOptics do not show wherein the means for combining the network data carried on the first segment and the second segment of the network cable and delivering the combined network data to the first set of tap ports and the second set of tap ports further comprises a fan out buffer disposed between the switch and the first and second set of tap ports.

Tomonaga shows where multiple inputs are sent into a switch, and then a multiplex/dexmultiplex unit, which comprises a fan out buffer memory (Figs. 46 and 47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Worrall in view of Sorhaug and NetOptics with that of Tomonaga in order to increase the number of devices and users that a network can accommodate and support (col. 3 lines 57 – 67).

13. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worrall in view of Sorhaug and NetOptics as applied to claims 1 and 2 above, and further in view of Yanacek et al. (5,940,376), hereafter Yanacek.

14. Regarding claim 12, Worrall in view of Sorhaug and NetOptics show claims 1 and 2.

Worrall in view of Sorhaug and NetOptics do not show wherein the first and second tap ports are capable of operating in a plurality of modes, each mode being defined by enabling or disabling the ability of the first and second tap ports to receive at least one of network data and device data.

Yanacek shows wherein the first and second tap ports are capable of operating in a plurality of modes, each mode being defined by enabling or disabling the ability of the first and second tap ports to receive at least one of network data and device data (Fig. 2, 10A – 10C).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Worrall in view of Sorhaug and NetOptics with that of Yanacek in order to enable and more advanced and flexible system, as well as

introducing additional features such as the ability to trouble-shoot a switched network or to enable call-tapping logic without the need of a centralized server to provide connections (Yanacek, col. 1 lines 45 – 60).

15. Regarding claim 13, Worrall in view of Sorhaug, NetOptics and Yanacek further show wherein selecting one of the plurality of modes in which the first and second tap ports may operate comprises: a management port configured to selectively connect to a remote computer; and an integrated circuit configured to receive management data from the management port to at least indirectly enable or disable the ability of the first and second tap port to receive at least one of network data and device data (Yanacek, Figs. 2, 10A – 10C).

16. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Worrall in view of Sorhaug, NetOptics and Yanacek as applied to claim13 above, further in view of Bouthillier et al. (6,092,724), hereafter Bouthillier.

Worrall in view of Sorhaug, NetOptics and Yanacek enable configuring a network tap to operate in one of a plurality of modes (Yanacek, Figs. 2, 10A – 10C).

Worrall in view of Sorhaug, NetOptics and Yanacek do not show where this mode selection is done via one or more manual switches on the network tap.

Bouthillier shows a manual switch for changing the configuration and operating mode of a network device (Abstract, Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Worrall in view of Sorhaug, NetOptics and Yanacek with that of Bouthillier to enable the use of manual switches to configure the electronic

device as manual switches are well-understood, easy to operate and reliable.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN M. FRINK whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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